

## ARTIFACT SHEET

Enter artifact number below. Artifact number is application number + artifact type code (see list below) + sequential letter (A, B, C ...). The first artifact folder for an artifact type receives the letter A, the second B, etc..

Examples: 59123456PA, 59123456PB, 59123456ZA, 59123456ZB

09728000 BA

Indicate quantity of a single type of artifact received but not scanned. Create individual artifact folder/box and artifact number for each Artifact Type.

CD(s) containing:  
computer program listing  
Doc Code: Computer  
pages of specification  
and/or sequence listing  
and/or table  
Doc Code: Artifact  
content unspecified or combined  
Doc Code: Artifact

Artifact Type Code: P  
  
Artifact Type Code: S  
  
Artifact Type Code: U

Stapled Set(s) Color Documents or B/W Photographs  
Doc Code: Artifact    Artifact Type Code: C

Microfilm(s)  
Doc Code: Artifact    Artifact Type Code: F

Video tape(s)  
Doc Code: Artifact    Artifact Type Code: V

Model(s)  
Doc Code: Artifact    Artifact Type Code: M

Bound Document(s)  
Doc Code: Artifact    Artifact Type Code: B

Confidential Information Disclosure Statement or Other Documents  
marked Proprietary, Trade Secrets, Subject to Protective Order,  
Material Submitted under MPEP 724.02, etc.  
Doc Code: Artifact    Artifact Type Code X

Other, description: \_\_\_\_\_  
Doc Code: Artifact    Artifact Type Code: Z

The  
United  
States  
of  
America



The Commissioner of  
Patents and Trademarks

*Has received an application for a patent for a new and useful invention. The title and description of the invention are enclosed. The requirements of law have been complied with, and it has been determined that a patent on the invention shall be granted under the law.*

*Therefore, this*

United States Patent

*Grants to the person(s) having title to this patent the right to exclude others from making, using, offering for sale, or selling the invention throughout the United States of America or importing the invention into the United States of America for the term set forth below, subject to the payment of maintenance fees as provided by law.*

*If this application was filed prior to June 8, 1995, the term of this patent is the longer of seventeen years from the date of grant of this patent or twenty years from the earliest effective U.S. filing date of the application, subject to any statutory extension.*

*If this application was filed on or after June 8, 1995, the term of this patent is twenty years from the U.S. filing date, subject to any statutory extension. If the application contains a specific reference to an earlier filed application or applications under 35 U.S.C. 120, 121 or 365(c), the term of the patent is twenty years from the date on which the earliest application was filed, subject to any statutory extension.*

  
Bruce Lehman  
Commissioner of Patents and Trademarks

  
Andria Z. Morton  
Attest



US005845300A

# United States Patent [19]

Comer et al.

[11] **Patent Number:** 5,845,300  
[45] **Date of Patent:** Dec. 1, 1998

[54] **METHOD AND APPARATUS FOR SUGGESTING COMPLETIONS FOR A PARTIALLY ENTERED DATA ITEM BASED ON PREVIOUSLY-ENTERED, ASSOCIATED DATA ITEMS**

[75] Inventors: **Ross Ward Comer, Bothell; Adam Brett Stein, Bellevue; David Russell Williams, Jr., Issaquah, all of Wash.**

[73] Assignee: **Microsoft Corporation, Redmond, Wash.**

[21] Appl. No.: 658,798

[22] Filed: Jun. 5, 1996

[51] Int. Cl.<sup>6</sup> ..... G06F 17/27

[52] U.S. Cl. .... 707/508

[58] **Field of Search** ..... 707/503-508

[56] References Cited

## U.S. PATENT DOCUMENTS

5,495,565 2/1996 Millard et al. .... 707/506

## OTHER PUBLICATIONS

**Smith, Do It Yourself Database, MacUser, v. 9, n. 11, p. 126(8) Nov. 1993.**

**Sullivan, Intuit's Upgrade Quickens Pace of Personal Finance.** MacWeek v. 7, n. 29, p. 52(2), Jul 19, 1993.

EDGE, Personal Finance: Quicken Adds Over 100 Improvements. *EDGE*, v. 3, p. 121, no. 7(1) Sep. 14, 1992.

Novell Quattro Pro User Guide, pp. 47-49, 1994.

Novell, Quattro Pro User Guide, pp. 47-49 1994. Quicken Version 5 for Windows, manufactured by Intuit, Inc. It is Applicants understanding that this product provides an automatic entry for data items in a fixed data structure environment. Based on the Copyright notice of 1985-1995, this reference may have been available for purchase more than 1 year prior to the filing date of Jun. 5, 1996. (4 pages).

Microsoft Access for Windows '95, manufactured by Microsoft Corporation. It is Applicants understanding that this product provides automatic capability for selecting data entries from a pre-defined or fixed list. Based on the Copyright notice of 1989-1995 this reference may have been available for purchase more than 1 year prior to the filing date of Jun. 5, 1996. (4 pages).

**Microsoft Money Version 3.0, Manufactured by Microsoft Corporation. It is Applicant's understanding that this product contains an automatic data entry feature, and has been available for purchase more than 1 year prior to the filing date of Jun. 5, 1996. (no pages).**

*Primary Examiner*—Anton Fetting  
*Attorney, Agent, or Firm*—Jones & Askew, LLP

[57] ABSTRACT

A system for improving the efficiency and reliability of entering data into a database or spreadsheet computer program by providing suggested completions to the data entry operator. The operator invokes an edit mode (200) for a particular data area and a dynamic list of possible completions is generated (210) based on other data items associated with the edited data area. The list of possible completions is dynamic because it changes to reflect the status of the current data within the database or spreadsheet. As the operator enters characters of a data item (220), the list of completed data items is searched for an entry that matches the entered data item (230). If a match is found then the matching item is displayed to the data entry operator as a suggested completion (240). The data entry operator can then elect to accept the suggested completion (250) or to continue entering the data item.

**38 Claims, 17 Drawing Sheets**

